

hamming

Hamming window

Syntax

```
w = hamming(L)
w = hamming(L, 'sflag')
```

Description

`w = hamming(L)` returns an L-point symmetric Hamming window in the column vector `w`. `L` should be a positive integer. The coefficients of a Hamming window are computed from the following equation.

$$w(n) = 0.54 - 0.46 \cos\left(2\pi \frac{n}{N}\right), \quad 0 \leq n \leq N$$

The window length is $L = N + 1$.

`w = hamming(L, 'sflag')` returns an L-point Hamming window using the window sampling specified by `'sflag'`, which can be either `'periodic'` or `'symmetric'` (the default). The `'periodic'` flag is useful for DFT/FFT purposes, such as in spectral analysis. The DFT/FFT contains an implicit periodic extension and the periodic flag enables a signal windowed with a periodic window to have perfect periodic extension. When `'periodic'` is specified, `hamming` computes a length `L+1` window and returns the first `L` points. When using windows for filter design, the `'symmetric'` flag should be used.

Note If you specify a one-point window (`L=1`), the value 1 is returned.

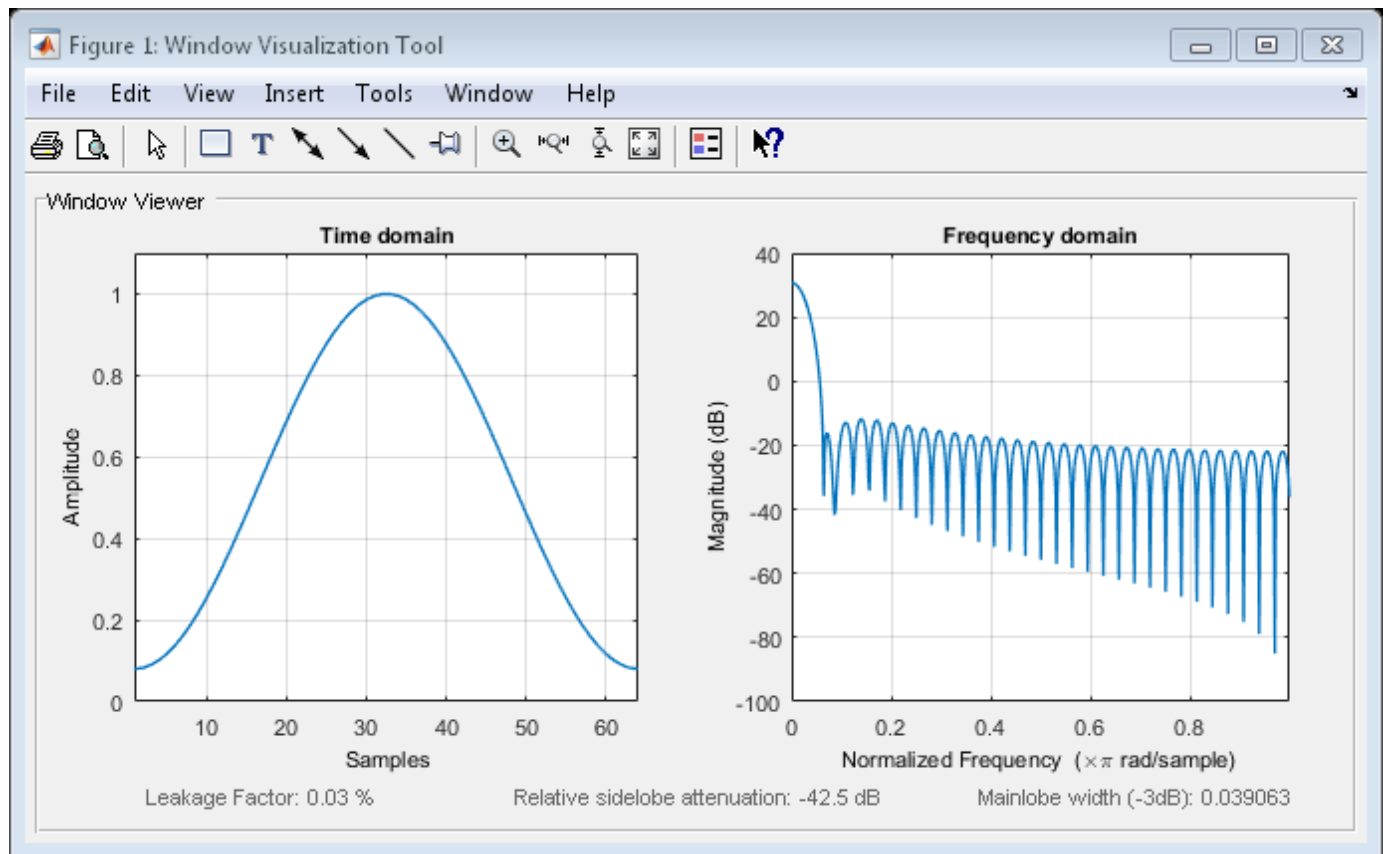
Examples

[collapse all](#)

Hamming Window

Create a 64-point Hamming window. Display the result using `wvtool`.

```
L = 64;
wvtool(hamming(L))
```



References

[1] Oppenheim, Alan V., Ronald W. Schafer, and John R. Buck. *Discrete-Time Signal Processing*. Upper Saddle River, NJ: Prentice Hall, 1999, p. 468.

See Also

[blackman](#) | [flattopwin](#) | [hann](#) | [window](#) | [wintool](#) | [wvtool](#)

Introduced before R2006a